

Exemption No. 7317A

UNITED STATES OF AMERICA  
DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
RENTON, WASHINGTON 98055-4056

In the matter of the petition of

**Lufthansa Technik**

For an exemption from §§ 25.562, 25.785(b),  
25.785(h)(2), 25.785(j), 25.813(e) and  
25.853(d) of Title 14, Code of Federal  
Regulations

**Regulatory Docket No. FAA-2001-8606**

**PARTIAL GRANT OF EXEMPTION**

By letter dated December 15, 2000, Mr. Bernhard Conrad, Senior Vice President Project and Development Engineering, Lufthansa Technik AG, Postfach 63 03 00, D-22313, Hamburg, Germany, petitioned the Federal Aviation Administration, for an amendment to Exemption No. 7317. The petition requests relief from §§ 25.562, 25.785(b), 25.785(h)(2), 25.785(j), 25.813(e), and 25.853(d) of Title 14, Code of Federal Regulations (14 CFR). The proposed exemption, if granted, would permit relief from "firm handholds" along each aisle in additional passenger areas on a Boeing Model 777-200 airplane.

**The petitioner requests relief from the following regulation:**

**Section 25.562** - Emergency landing dynamic loading conditions for the installation of a medical berth.

**Section 25.785(b)** - Amendment 25-64, requirements for general occupant protection for the installation of a medical berth.

**ANM-01-125-E**

**Section 25.785(h)(2)** – Requires that flight attendant seats be located to provide a direct view of the passenger cabin.

**Section 25.785(j)** – Requires a “Firm handhold” along each aisle.

**Section 25.813(e)** - Prohibits installation of interior doors in between passenger compartments.

**Section 25.853(d)** - Limits maximum heat release rates and smoke emissions for large panel cabin interior materials.

**The petitioner's supportive information is as follows:**

By letter dated December 15, 2000, Lufthansa Technik (LHT) petitioned the Federal Aviation Administration for an amendment to Exemption No. 7317. The petition requests relief from § 25.785(j) of 14 CFR for “firm handholds” along each aisle to be extended to cover additional passenger areas in the airplane.

"The FAA has determined that the noncompliance situation described in our original petition is in fact also existing in other areas, namely the medical room, the master bedroom, both master bathrooms, the private office, and the first class sleeper area.

“There is agreement between the FAA/LBA [German LuftfahrtBundesamt] and LHT certification specialists that justification and occupant safety considerations, as well as the public interest arguments offered in our original petition, are also applicable to the additional rooms. We therefore submit this petition for an appropriate amendment to Exemption No. 7317.

“In view of the imminent delivery we respectfully request that the petition be processed without further delay and that the publication and comment procedures as per FAR 11.27 be waived for the following reasons:

- an exemption has been granted before for other areas of the airplane
- there were no adverse comments on the original petition
- the issue is non controversial
- granting the petition would not set a precedent"

The petitioner requests an exemption for an executive interior as defined in the attached cabin layout (available in the docket). The Model 777-200 is for "private, not-for-hire use" and not offered for public conveyance.

"In addition, reference is made to the Petition for Exemption submitted by Boeing in connection with the Boeing Business Jet BBJ (dated May 22, 1999) and the resultant FAA Grant of Partial Exemption No. 6820 and 6820A. This exemption addresses a

number of reasons why certain exemptions from 14 CFR part 25 are considered to be reasonable for airplanes configured for private operation.

**“General Background:**

"The Saudi Oger 777 is the first Lufthansa Technik (LHT) project for this airplane model to be operated under US-registration and certification is processed in the form of a German LuftfahrtBundesamt (LBA) STC for which validation by the FAA is sought under the recently concluded 'Implementation Procedures for Design Approval, Production Activities, Export Airworthiness Approval, Post Design Approval Activities, and Technical Assistance between Authorities,' in accordance with the Bilateral Aviation Safety Agreement between the U.S. and Germany (BASA IPA)."

**“Exemption Requested:"**

Lufthansa Technik submitted a petition for exemption under § 11.25 from the requirements of 14 CFR § 25.785(j). Lufthansa requests that Boeing Model 777-200, when configured for private use and not-for-hire, and operating under rules FAR part 91 or FAR part 125, be exempted from that part of § 25.785(j) which requires a firm handhold along each aisle for the state room area, medical room, master bedroom, both master bathrooms, the private office, and the first class sleeper area.

**“Justification:**

“The 'firm handhold' was not addressed under the BBJ exemption. In the Model 777-200, the issue arises because of its wide fuselage diameter as compared to the relatively narrow fuselage of the BBJ. Customers are buying large airplanes because they wish to create the same spacious and impressive atmosphere they are used to in their homes, offices or palaces. The wide body Model 777 satisfies these requirements in a perfect way. On the other hand, the requirement for a firm handhold along aisles cannot be met for the state room due to the wide open spaces between individual seat backs, which typically provide an adequate handhold. In fact, due to its spaciousness, there is no readily identifiable 'aisle' in the state room. Any construction hanging down from the ceiling would ruin the appearance of the stateroom and is not acceptable to the customer.

**“Occupant Safety Considerations:**

“The risk for occupants due to the non availability of direct handholds in the state room is considered acceptable for the following reasons:

"- The stateroom contains four tables reachable with only one or two steps with an adjustable height range of 21 to 30 inches. While not meeting the generally acceptable height of 31 inches to qualify as a hand hold, they still allow a person to stabilize himself during turbulence. They are designed to remain structurally intact in such a situation.

"- All furniture in the stateroom has rounded corners and edges to avoid serious injury in case of turbulence.

"- The installed seats and divans are heavily upholstered and will not cause injuries when contacted.

"- There will be a recommendation to passengers to remain seated with their seat belts fastened."

### **“Public Interest**

“As in the case of the already established Exemptions No.6598, 6820 and 6820A, granting this petition for exemption would be clearly in the public interest as it allows efficient and safe carriage of Heads of State and executives in the sought for environment which would otherwise not be possible.

“Without the granting of this exemption the sales opportunities for the Boeing 777-200 would suffer, because the typical and highly desirable VIP type configurations with private quarters and comfortable seating arrangements could no longer be realized.

“Granting the exemption furthermore would be in the interest of international harmonization because a number of authorities worldwide have already accepted configurations as proposed in this petition for exemption.

“Granting the exemption will also allow the 777 airplane to be configured to provide transport of non-ambulatory individuals to locations with needed medical facilities. By not granting the exemption, transport of such individuals aboard 777 private flights will be denied and access to needed medical facilities may not be readily available.”

The FAA has determined that good cause exist for waiving the requirement for Federal Register publication because the exemption, if granted, would not set a precedent, and any delay in acting on this petition would be detrimental to Lufthansa Technik.

### **The FAA's analysis/summary is as follows:**

Exemption No. 7317 was a partial grant to permit an executive interior to be installed for "private, not-for-hire" use on a Boeing Model 777-200 airplane. Lufthansa Technik's current petition is to expand that effectivity to include additional passenger areas in the airplane without providing "firm handholds" along each aisle in these areas.

The FAA is giving great attention to the issue of transport category airplanes operated in private use. There are several regulatory requirements, including some of those identified by the petitioner, that lend themselves to consideration for modification when looking at the differences between commercial and private use operations. The FAA intends to summarize its views on these regulations and, ultimately, propose modifications to the requirements, where appropriate. It may be that the regulations that

are the subject of this petition are included in the proposed modifications, and that additional design flexibility can be offered, when certain circumstances are met. This issue is not resolved at this time, however, and the particular airplane in question must be addressed on its own merits.

While it is true that the major impetus for most of the requirements referenced in this petition is commercial use, it is incumbent upon the FAA to upgrade design safety as the state of the art progresses, irrespective of the type of operation.

### Firm Handhold

The petitioner requests an exemption from the handhold requirements of § 25.785(j) for the area of the state room, medical room, the master bedroom, both master bathrooms, the private office and the first class sleeper area.

The state room has several divans installed around the outside of the room with an adjustable height table in front of each divan.

The medical room has a medical stretcher and a side-facing sofa that converts into a berth. Within the medical room the greatest distance between firm handholds is approximately 97 inches.

The master bedroom has a large bed, a desk and a stowage credenza. Within the master bedroom the greatest distance between firm handholds is approximately 89 inches.

The private office has a large desk, two side-facing sofas and two low end tables. Within the private office the greatest distance between firm handholds is approximately 84 inches.

The first class sleepers seat have a seat pitch of approximately 74 inches and the seat backs when in the full upright position provide firm handholds. However, when the seats are in the sleeper position the seat backs are too low to be used as firm handholds.

The two master bathrooms are very large for an airplane, approximately 72 inches wide by 110 inches long. The counter area and sinks provide handholds on one side in each bathroom. The greatest distance between firm handholds is approximately 72 inches.

The FAA has determined that to be effective, handholds should be at least 33 inches in height and no more the 65 inches apart from each other. The petitioner proposes criteria for accepting objects of at least 31 inches in height and within one or two steps of each other acceptable as firm handholds for the proposed configuration.

Although the FAA does not agree with the petitioner's proposal for firm handhold height and spacing, the FAA has considered the requirement for firm handholds in rooms in the context of private use airplanes. The proposed arrangement the petitioner has submitted for the area of the state room, medical room, the master bedroom, both master bathrooms,

the private office and the first class sleeper area produce a configuration that provides an acceptable level of safety for a private, not-for-hire use airplane

In consideration of the foregoing, I find that a partial grant of exemption is in the public interest and will not affect the level of safety provided by the regulations. Therefore, pursuant to the authority contained in § 49 U.S.C. §§ 40113 and 44701, delegated to me by the Administrator, Lufthansa Technik is hereby granted an exemption from the requirements of §§ 25.562, 25.785(b), 25.785(h)(2), 25.785(j), 25.813(e), and 25.853(d). This exemption allows the installation of a medical berth that does not meet the dynamic seat requirements; flight attendant seats that do not provide a direct view of the cabin; the area of the state room, medical room, master bedroom, both master bathrooms, private office, and the first class sleeper area that do not provide firm “handholds” in the aisle; the installation of interior doors between passenger compartments; and interior materials that do not comply with heat release and smoke emissions requirements for Boeing Model 777-2AN airplane, serial number 29953, subject to a revision for clarification purposes to the following condition and limitation:

1. The airplane is not operated for hire, or offered for common carriage. This provision does not preclude the operator from receiving remuneration to the extent consistent with 14 CFR part 125 and 14 CFR part 91, subpart F, as applicable. The maximum passenger capacity is limited to 80.

All other provisions of Exemption No. 7317, together with associated conditions and limitations, remain the same and are applicable to this amendment.  
This amendment is part of, and shall be attached to, Exemption No. 7317.

Issued in Renton Washington, on February 14, 2001

/s/ Charles Huber  
Charles Huber  
Acting Manager  
Transport Airplane Directorate  
Aircraft Certification Service, ANM-100